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(FILE 'HOME' ENTERED AT 17:11:16 ON 10 MAR 2003)

FILE 'REGISTRY' ENTERED AT 17:11:45 ON 10 MAR 2003

E "ADENOSYLMETHIONINE"/CN 25

E "S-ADENOSYL-L-METHIONINE"/CN 25

L1 14 S E3 OR E4 OR E5 OR E7 OR E9 OR E11 OR E14 OR E18 OR E19 OR E28

FILE 'CAPLUS' ENTERED AT 17:13:58 ON 10 MAR 2003

L2 3210 S L1

L3 130 L2 AND SALT

L4 12 L3 AND (SULFONIUM OR CHIRAL? OR ENANTIOM? OR DIASTEREOM?)

=> d l4 total ibib abs

L4 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:158385 CAPLUS

DOCUMENT NUMBER: 136:205441

TITLE: **Enantiomers** of S-adenosyl-L-methionine

INVENTOR(S): Hebert, Rolland F.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002025926	A1	20020228	US 2001-943243	20010830
PRIORITY APPLN. INFO.:			US 2000-229151P	P 20000830

AB **Enantiomers** of S-adenosyl-l-methionine, their stable **salts** and their uses are described. These compns. possess potent activity in treating various conditions involving hypomethylation and transulfuration reactions and are valuable for use as active constituents in pharmaceutical compns. For example, (S,S)-S-adenosylmethionine was prepared and stabilized using p-toluene sulfonate. (S,S)-S-adenosylmethionine enteric-coated tablets (400 mg) were administered twice daily for 14 days or until remission of depression symptoms in an open, non-blind study to 10 volunteers (one patient declined to continue the study after beginning). All patients had normal results on pre-study medical exams., including laboratory exams. Eight of the nine patients who completed the trial improved over the 14 days, while one patient had no change at all. No side effects were noted or reported by any of the patients nor as measured by laboratory or phys. examination (S, S)-S-adenosylmethionine 400 mg twice daily appeared to be safe and effective in this small, non-blinded study of depression.

L4 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:868476 CAPLUS

DOCUMENT NUMBER: 136:5067

TITLE: Process for the preparation of pharmaceutically acceptable **salts** of (SS-RS)-S-adenosyl-L-methionine

INVENTOR(S): Berna, Marco; Sivieri, Lino; Santambrogio, Gianni;

10/03/2003 17:15

PATENT ASSIGNEE(S): Valoti, Ermanno
 SOURCE: Chementecno S.r.l., Italy
 PCT Int. Appl., 18 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001090130	A1	20011129	WO 2001-EP3633	20010330
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1283845	A1	20030219	EP 2001-943206	20010330
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002010147	A1	20020124	US 2001-829906	20010411
US 2002173012	A1	20021121	US 2002-142876	20020513
PRIORITY APPLN. INFO.:			IT 2000-MI1158	A 20000525
			WO 2001-EP3633	W 20010330
			US 2001-829906	A3 20010411
AB The present invention relates to a process for the preparation of pharmaceutically acceptable salts of (SS,RS)-S-adenosyl-L-methionine and allows one to obtain the salified (RS)-(+)-S-adenosyl-L-methionine diastereoisomer in amts. ≤3% with respect to the salified (SS)-(+)-S-adenosyl-L-methionine diastereoisomer; the salts that can be obtained by the process of the invention keep their configuration stable in time.				
REFERENCE COUNT:		4	THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT	

L4 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:790635 CAPLUS

DOCUMENT NUMBER: 132:255863

TITLE: Synthesis and characterization of a new class of stable S-adenosyl-L-methionine **salts**

AUTHOR(S): Morana, A.; Di Lernia, I.; Carteni, M.; De Rosa, R.; De Rosa, M.

CORPORATE SOURCE: CNR, Institute of Food Science and Technology, Avellino, 83100, Italy

SOURCE: International Journal of Pharmaceutics (2000), 194(1), 61-68

CODEN: IJPHDE; ISSN: 0378-5173

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB S-adenosyl-l-methionine (SAM) is an important metabolic intermediate that serves as a donor of Me and aminopropyl groups to a variety of acceptor mols. The mol. in vitro is unstable both in solution and in crystalline form

undergoing irreversible conversion to 5'-methyltioadenosine (MTA) and homoserine lactone. Since this form of instability seems to be prevented in the cell of the living organism by bonds with macromols., we designed and developed a novel class of **salts** of SAM with large size anions to improve the stability of the **sulfonium** compound outside the cell. For this purpose we synthesized and characterized by NMR and IR spectroscopy anions consisting of amide derivs. of taurine with fatty acids. Stability studies performed with the new SAM **salts** indicate that SAM becomes much more stable when it interacts with large size anions and in fact, more than 84% of the SAM is recovered after 36 mo in lyophilized samples. The high stability of the new products widens the possibility of new therapeutic applications of SAM in human therapy.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1977:602064 CAPLUS

DOCUMENT NUMBER: 87:202064

TITLE: Determination of the absolute configuration at the **sulfonium** center of S-adenosylmethionine. Correlation with the absolute configuration of the **diastereomeric** S-carboxymethyl-(S)-methionine **salts**

AUTHOR(S): Cornforth, John Warcup; Reichard, Scott A.; Talalay, Paul; Carrell, H. L.; Glusker, Jenny P.

CORPORATE SOURCE: Milstead Lab. Chem. Enzymol., Shell Res. Ltd., Sittingbourne/Kent, UK

SOURCE: Journal of the American Chemical Society (1977), 99(22), 7292-300
CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The absolute configuration of the **sulfonium** center of naturally-occurring S-adenosyl-L-methionine (I) was (S) by degradn. of enzymically-produced ¹⁴CH₃-labeled I with alkali and IO₄⁻ and correlating the resulting S-carboxymethyl derivative (II) with synthetic **diastereomeric** S-carboxymethyl-L-methionine TNB **salts** (TNB = 2,4,6-trinitrobenzenesulfonate). L-methionine was treated with ICH₂CO₂H to give **diastereomeric** (R)- and (S)-S-carboxymethyl-L-methionine [(R)- and (S)-III] which were separated as their polyiodide **salts** and then each **diastereomer** was converted to its TNB **salt**. The absolute configuration of (R)-III.TNB was determined by x-ray anal.; II was correlated with (S)-III.TNB.

L4 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1966:106143 CAPLUS

DOCUMENT NUMBER: 64:106143

ORIGINAL REFERENCE NO.: 64:20069d-e

TITLE: Enthalpy changes accompanying the transfer of a methyl group from S-adenosylmethionine and other **sulfonium** compounds to homocysteine

AUTHOR(S): Mudd, S. Harvey; Klee, Werner A.; Ross, Philip D.

CORPORATE SOURCE: Natl. Insts. of Health, U.S. Dept. of Health, Educ., & Welfare, Bethesda, MD

SOURCE: Biochemistry (1966), 5(5), 1653-60

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The enthalpy changes during methyl transfer from S-adenosylmethionine, dimethylpropiothetin, or trimethylsul-. fonium salts to homocysteine in neutral aqueous buffered solution have been measured calorimetrically. The observed values are compared to previously reported values for similar reactions. Transfers from these **sulfonium** compds. are all highly exothermic reactions, but there are relatively large differences in the changes observed within the present series. Possible reasons for these differences are discussed. It is suggested that differential hydration may play an important role.

L4 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1966:37893 CAPLUS

DOCUMENT NUMBER: 64:37893

ORIGINAL REFERENCE NO.: 64:7080g-h

TITLE: The production of S-adenosyl-L-methionine and S-adenosyl-L-ethionine by yeast

AUTHOR(S): Schlenk, Fritz; Zydek, Cynthia R.; Ehninger, Dimis J.; Dainko, Julia L.

CORPORATE SOURCE: Argonne Natl. Lab., Argonne, IL

SOURCE: Enzymologia (1965), 29(3-5), 283-98

DOCUMENT TYPE: Journal

LANGUAGE: English

AB L-Methionine (I) or L-ethionine (II) was incorporated into the culture medium in which yeast metabolized aerobically and produced the necessary quantity of ATP. ATP reacted with the S-containing amino-acid to yield S-adenosyl-L-methionine (III) and S-adenosyl-L-ethionine (IV). The optimum quantities of glucose, (NH₄)₂SO₄, Mg, Mn, Zn, I, or II on the formation of III or IV were investigated. Conditions suitable for extraction of the yeast cell by HClO₄ or Cl₃CCO₂H were reported. A modified chromatographic procedure was recommended for the isolation of the **sulfonium** compds., in which nucleic acid fragments and coenzymes pass through the column while the **sulfonium** compds. were retained; these were eluted by weak acid. The quality of preps. obtained in this way suffice for many exptl. purposes.

L4 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1963:410396 CAPLUS

DOCUMENT NUMBER: 59:10396

ORIGINAL REFERENCE NO.: 59:1933c-e

TITLE: Some effects of ionizing radiation on methionine **sulfonium** compounds

AUTHOR(S): Schlenk, F.; Dainko, J. L.

CORPORATE SOURCE: Argonne Natl. Lab., Argonne, IL

SOURCE: Radiation Res. (1962), 16, 327-35

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB In dilute aqueous solns. S-methylmethionine is more sensitive to x-rays or γ-rays than S-adenosylmethionine, but neither shows any unusual sensitivity. Irradiation products of both compds. include methionine, methionine sulfoxide, 3-methylmercaptopyrrolamine, 3-aminopropanal, homoserine, and homoserine lactone. In addition S-adenosylmethionine gives 5'-methylthioadenosine and its sulfoxide, adenine, and hypoxanthine. In yeast cells (Candida utilis) irradiated in suspension S-adenosylmethionine was neither destroyed nor released from vacuoles by 400,000 r. of x-radiation. The enzymic synthesis of the compound, including formation of the purine and ribose structures from simple precursors, was unchanged after exposure of yeast cells to 400,000 r. of x-rays or 1.0 Mrad of

γ-radiation.

L4 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1963:83750 CAPLUS

DOCUMENT NUMBER: 58:83750

ORIGINAL REFERENCE NO.: 58:14425h,14426a

TITLE: Paper chromatography of several classes of compounds; correlated Rf values in a variety of solvent systems

AUTHOR(S): Fink, Kay; Cline, R. E.; Fink, R. M.

CORPORATE SOURCE: Univ. of California, Los Angeles

SOURCE: Anal. Chem. (1963), 35, 389-98

CODEN: ANCHAM; ISSN: 0003-2700

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Rf values for 388 compds., including amino acids, purines, pyrimidines, sugars, organic acids, and compds. reacting with acidic p-dimethylaminobenzaldehyde, were determined by ascending paper chromatography with 10 different solvent systems. Compds. are classified further into 6 tables according to the method of detection on the chromatogram. The data are useful for the determination of radioactive metabolites which are below the sensitivity of colorimetric methods.

L4 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1963:21681 CAPLUS

DOCUMENT NUMBER: 58:21681

ORIGINAL REFERENCE NO.: 58:3627d-e

TITLE: Alkaline hydrolysis of s-adenosylmethionine in tritiated water

AUTHOR(S): Schlenk, F.; Dainko, J. L.

CORPORATE SOURCE: Argonne Natl. Lab., Argonne, IL

SOURCE: Biochem. Biophysics Res. Commun. (1962), 8, 24-7

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB The alkaline hydrolysis of s-adenosylmethionine in tritiated water yields an ethylenic intermediate (I) with a double bond at C atom 4 and 5 of the ribose. Adenine is split off. The furanoid ring closes at C-4 to yield D-ribose and L-lyxose **sulfonium** compds. The presence of I is indicated by the uptake of tritium into the carbohydrate moiety. The product is s-pentosylmethionine

L4 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1962:73694 CAPLUS

DOCUMENT NUMBER: 56:73694

ORIGINAL REFERENCE NO.: 56:14384i,14385a-d

TITLE: The alkali hydrolysis of **sulfonium** nucleosides

AUTHOR(S): Frank, W.; Wiczorkowski, J.; Hughes, N. A.; Baddiley, J.

CORPORATE SOURCE: Univ. Durhan, Newcastle-upon-Tyne, UK

SOURCE: Proc. Chem. Soc. (1961) 449-50

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Decomposition of active methionine, S-(5'-adenosyl)methionine, in alkali was known to give adenine and a **sulfonium** sugar which underwent further decomposition. When the reaction was carried out in Na methoxide and MeOH, Me glycosides were formed, whereas with Na n-butoxide and BuOH, **sulfonium** Bu glycosides were produced. The properties of

sulfonium nucleosides were examined. Me 2,3-O-isopropylidene-5-O-(p-tolylsulfonyl)- β -D-ribofuranoside was converted to Me 2,3-O-isopropylidene-5-S-methyl-5-thio- β -D-ribofuranoside (I) by reaction with Na methyl sulfide. The isopropylidene group was removed and the product treated with MeI to give Me 5-dimethylsulfonium- β -D-ribofuranoside iodide (II). Some of II was oxidized by periodate, reduced with NaBH₄, and hydrolyzed with acid. From the mixture 1-deoxy-1-dimethylsulfonio-L-glycerol was isolated as the reineckate and converted to the acetate, $[\alpha]_{20D} 38^\circ$ and iodide, $[\alpha]_{20D} 27^\circ$, which did not differ except in the sign of the optical rotation from the corresponding **salts** of 1-deoxy-1-dimethylsulfonio-D-glycerol prepared from 2,3-O-isopropylidene-1-O-(p-tolylsulfonyl)-D-glycerol. However, if II were treated with Na methoxide in MeOH before formation and isolation of the 1-deoxy-1-dimethylsulfonioglycerol **salts**, extensive racemization occurred (acetate, $[\alpha]_{20D} 0.5^\circ$, iodide, $[\alpha]_{20D} 0.2^\circ$). This indicated that the alkali-treated glycoside was a mixture of the D-ribose and L-lyxose derivs. A sequence of reactions for the decomposition of S-(5'-adenosyl)methionine was proposed involving an elimination of adenine by the type of reaction demonstrated for β -substituted ethyldimethylsulfonium compds. (CA 50, 3305e) followed by reaction between the ethylenic intermediate and OH⁻ to give **sulfonium** derivs. of both D-ribose and L-lyxose.

L4 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1962:33353 CAPLUS
 DOCUMENT NUMBER: 56:33353
 ORIGINAL REFERENCE NO.: 56:6371e-g
 TITLE: S-Methylmethionine- and S-adenosylmethionine-homocysteine transmethylation in higher plant seeds
 AUTHOR(S): Turner, James E.; Shapiro, Stanley K.
 CORPORATE SOURCE: Argonne Natl. Lab., Argonne, IL
 SOURCE: Biochim. et Biophys. Acta (1961), 51, 581-4
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB S-Methylmethionine- and S-adenosylmethionine-homocysteine transmethylation activity was detected in cell-free homogenates of seeds of several plant species. S-Methylmethionine and S-adenosylmethionine served as Me donors to homocysteine, with the formation of methionine. The reaction was followed by the use of donor mols. labeled with C¹⁴H₃ groups. Homogenates of seeds from corn, garden pea, lima bean, and tobacco had similar specific transmethylation activities, but only about 10% of that of yeast or liver exts.; lima bean and pea seeds contained more activity/g. seed than corn or tobacco. Sunflower seed was very low in this activity. S-Methylmethionine was a better Me donor than S-adenosylmethionine.

L4 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1959:112536 CAPLUS
 DOCUMENT NUMBER: 53:112536
 ORIGINAL REFERENCE NO.: 53:20226c-e
 TITLE: Improved procedure for the isolation of S-adenosylmethionine and S-adenosylethionine
 AUTHOR(S): Schlenk, F.; Daenko, J. L.; Stanford, S. M.
 CORPORATE SOURCE: Argonne Natl. Lab., Lemont, IL
 SOURCE: Arch. Biochem. Biophys. (1959), 83, 28-34
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

- AB cf. C.A. 52, 7430fh. Improvements are reported for the preparation of S-adenosylmethionine and S-adenosylethionine from yeast cells. For the biosynthesis of compds. with the L-configuration in the amino-acid moiety, dried activated bakers' yeast is the material of choice; for the corresponding biosynthesis from the D-isomers, Torulopsis is superior to Saccharomyces. Adaptive enzyme formation does not seem to play a part in the biosynthesis. The purification of the **sulfonium** compds. was simplified by replacing one of the chromatographic procedures by precipitation with Reinecke **salt**. The stability of the **sulfonium** compds. under storage is discussed.

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(FILE 'HOME' ENTERED AT 17:11:16 ON 10 MAR 2003)

FILE 'REGISTRY' ENTERED AT 17:11:45 ON 10 MAR 2003

E "ADENOSYLMETHIONINE"/CN 25

E "S-ADENOSYL-L-METHIONINE"/CN 25

L1 14 S E3 OR E4 OR E5 OR E7 OR E9 OR E11 OR E14 OR E18 OR E19 OR E28

FILE 'CAPLUS' ENTERED AT 17:13:58 ON 10 MAR 2003

L2 3210 S L1

L3 130 L2 AND SALT

L4 12 L3 AND (SULFONIUM OR CHIRAL? OR ENANTIOM? OR DIASTEREOM?)

FILE 'STNGUIDE' ENTERED AT 17:15:48 ON 10 MAR 2003

FILE 'CAPLUS' ENTERED AT 17:29:21 ON 10 MAR 2003

L5 96 L2 AND (SULFONIUM OR CHIRAL? OR ENANTIOM? OR DIASTEREOM?)

L6 84 L5 NOT L4

L7 82 L6 NOT PY>2000

L8 76 L2 AND SULFONIUM

L9 5 L8 AND (CHIRAL? OR ENANTIOM? OR DIASTEREOM?)

L10 4 L9 NOT L4

=> d l10 total ibib abs

L10 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1989:497696 CAPLUS

DOCUMENT NUMBER: 111:97696

TITLE: **Chiral** stability of S-adenosylmethionine -
mutarotation without pseudorotation

AUTHOR(S): Uzar, Horst C.

CORPORATE SOURCE: Inst. Org. Chem., Univ. Siegen, Siegen, D-5900, Fed.
Rep. Ger.

SOURCE: Liebigs Annalen der Chemie (1989), (7), 607-10
CODEN: LACHDL; ISSN: 0170-2041

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The isomerization of S-adenosylmethionine in the presence of different
anions and at various temps. was determined by NMR spectroscopy. The rate of
the epimerization at the **sulfonium** center was in good agreement
with one of 2 previously reported values determined by another method. The
reaction most likely proceeds by pyramidal inversion and takes place in
solution as well as in the freeze-dried state.

L10 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1989:435586 CAPLUS

DOCUMENT NUMBER: 111:35586

TITLE: Specificity of S-adenosyl-L-methionine in the
inactivation and the labeling of 1-aminocyclopropane-1-
carboxylate synthase isolated from tomato fruits

AUTHOR(S): Satoh, Shigeru; Yang, Shang Fa

CORPORATE SOURCE: Dep. Biol. Sci., Tohoku Univ., Sendai, 980, Japan

SOURCE: Archives of Biochemistry and Biophysics (1989),
271(1), 107-12

CODEN: ABBIA4; ISSN: 0003-9861

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 1-Aminocyclopropane-1-carboxylase (ACC) synthase (I), which catalyzes the conversion of S-adenosyl-L-methionine (AdoMet) to ACC, is irreversibly inactivated by its substrate, AdoMet. AdoMet has 2 **diastereomers** with respect to its **sulfonium** center, (-)-Ado-Met and (+)-AdoMet. The (+)- and (-)-AdoMet isomers were prepared from a com. source, and their activities as a substrate and as an inactivator of ACC synthase isolated from tomato fruits were compared. Only (-)-AdoMet produced ACC, whereas both (-)- and (+)-AdoMet inactivated I; (+)-AdoMet inactivated I 3-fold faster than (-)-AdoMet. Previously, it was shown that I was specifically radiolabeled when the enzyme was incubated with S-adenosyl-L-[3,4-¹⁴C]methionine. The present results further indicated that S-adenosyl-L-[carboxyl-¹³C]methionine, but not S-adenosyl-L-[methyl-¹⁴C]methionine, radiolabeled I. The data suggested that the 2-aminobutyric acid portion of AdoMet is linked to I during the autoinactivation process. A possible mechanism for I inactivation by AdoMet was discussed.

L10 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1981:551125 CAPLUS

DOCUMENT NUMBER: 95:151125

TITLE: S-adenosyl-L-methionine and S-adenosyl-L-homocysteine, an NMR study

AUTHOR(S): Stolowitz, Mark L.; Minch, M. J.

CORPORATE SOURCE: Chem. Dep., Univ. Pac., Stockton, CA, 95211, USA

SOURCE: Journal of the American Chemical Society (1981), 103(20), 6015-19

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The conformations of the title compds. (I and II, resp.) were determined from their 360-MHz ¹H NMR in D₂O. The ribose of both compds. has a C3'-exo conformation, but I has 1 favored gauche-anti conformation about the C4'-C5' bond, whereas the orientation about the C4'-C5' bond of II is distributed between 2 gauche-anti rotamers. The methionine side chain of I undergoes rapid rotation about the C α -C β and C β -C γ bonds, whereas the side chain of II has a preference for the gauche-anti conformations about the C α -C β bond. The ¹H and ¹³C NMR of com. available (-)-I indicated the presence of a small amount of the (+)-**sulfonium diastereomer**.

L10 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1976:487099 CAPLUS

DOCUMENT NUMBER: 85:87099

TITLE: Potential inhibitors of S-adenosylmethionine-dependent methyltransferases. 5. Role of the asymmetric **sulfonium** pole in the enzymic binding of S-adenosyl-L-methionine

AUTHOR(S): Borchardt, R. T.; Wu, Yih Shiong

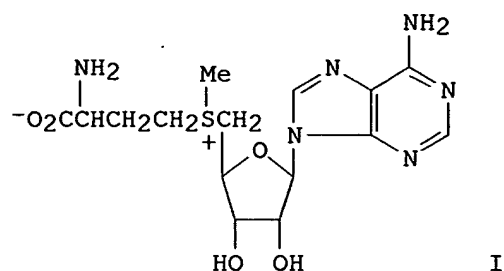
CORPORATE SOURCE: Dep. Biochem., Univ. Kansas, Lawrence, KS, USA

SOURCE: Journal of Medicinal Chemistry (1976), 19(9), 1099-103
CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB For the transmethylations catalyzed by catechol O-methyltransferase (EC 2.1.1.6) [9012-25-3], phenylethanolamine N-methyltransferase (EC 2.1.1.28) [9037-68-7], histamine N-methyltransferase (EC 2.1.1.8) [9029-80-5], and hydroxyindole O-methyltransferase (EC 2.1.1.4) [9029-77-0], the natural **enantiomer** 10(-)-S-adenosyl-L-methionine[(-)-SAM][(-)-I] was active as a Me donor, while 903 (+)-SAM was inactive. (+)-SAM, prepared by enzymic resolution of (±)-SAM [23095-97-8], was a potent inhibitor of the enzyme-catalyzed transmethylations. The relation of configuration to enzyme binding and methyl transfer was discussed.